

### **REMARKS**

In the Office Action<sup>1</sup> mailed December 11, 2008, the Examiner took the following actions:

- a) objected to the drawings;
- b) rejected claims 1, 5, and 9 under 35 U.S.C. § 102(b) as being anticipated by Schilling et al. (U.S. Patent No. 6,338,492, hereafter "Schilling");
- c) rejected claims 2-4 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Schilling;
- d) rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Sasaki et al. (U.S. Patent No. 6,337,120, hereafter "Sasaki"); and
- e) rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Sakumato et al. (U.S. Publication No. 2002/0106954, hereafter "Sakumato").

By this Amendment, Applicants cancel claim 2, without prejudice or disclaimer, and amend claims 1, 3, and 9. Claims 1 and 3-9 are now pending.

#### **I. Objection to the Drawings**

Applicants have amended claim 1 to remove the recitation of "using a dispenser." Accordingly, Applicants respectfully request that the Examiner withdraw the objection to the drawings.

#### **II. Rejection of Claims 1, 5, and 9 under 35 U.S.C. § 102(b)**

Applicants respectfully traverse the rejection of claims 1, 5, and 9 under 35 U.S.C. § 102(b) as being anticipated by Schilling. In order to properly establish that

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<sup>1</sup> The Office Action contains statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

Schilling anticipates Applicants' claimed invention under 35 U.S.C. § 102(b), each and every element of the claims in issue must be found, either expressly described or under principles of inherency, in that single reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Claim 1, as amended, recites a sealing structure for polymer electrolyte fuel cell, comprising,

a bipolar plate with sealing groove to be filled with rubber;

a gasket interposed between said bipolar plate and a membrane electrode assembly; and

an anchor in contact with said sealing groove, whose width is greater than the width of said sealing groove.

(Emphasis added). Schilling fails to teach or suggest at least the claimed gasket and the claimed anchor.

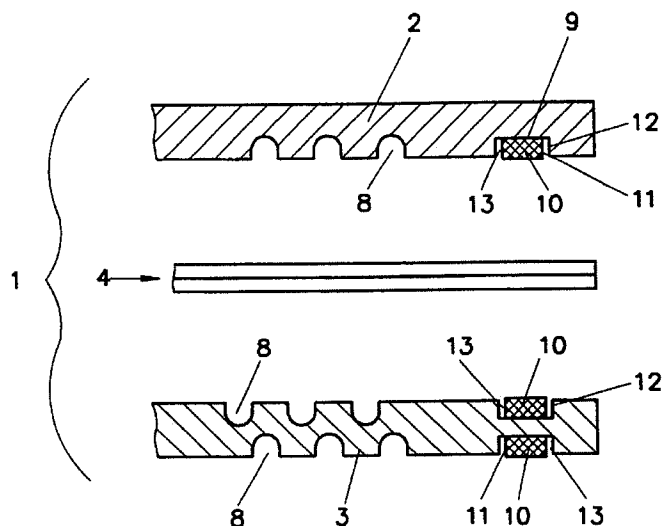
The Examiner asserted, "Schilling teaches a sealing structure for polymer electrolyte fuel cell comprising: a bipolar plate (2 and 3) with sealing groove (9) to be filled with a rubber [using a] dispenser (using an injection process); (see col. 3, lines 48-50) and a gasket (sealing element 10) interposed between said bipolar plate and a membrane electrode assembly (MEA 4; figure 1)." Office Action at 3. This is not correct.

Schilling, at column 3, lines 39-52, discloses,

FIG. 1 shows a section through a rim zone of a fuel cell, details concerning the construction of the fuel cell having been omitted. Individual cell 1 is made essentially of bipolar plates 2 and 3 and the

interposed MEA (membrane electrode assembly) 4. Bipolar plates 2 and 3 are provided with channels 8 for gases and liquids. Sealing elements 10 are inserted into grooves 9 of bipolar plates 2 and 3. . . . Grooves 9 are formed during the production of graphite plates 2 and 3. Sealing elements 10 are injected.

(Emphasis added). Further, Schilling, at column 1, lines 24-26, states, “[t]he European Patent PA 0 604 683 . . . suggests a sealing material made of silicon, rubber or extrudable elastomeric material,” (emphasis added). Accordingly, groove 9 of Schilling at best corresponds to the claimed “groove,” and sealing element 10 of Schilling at best corresponds to the “rubber” recited in claim 1. Thus, sealing element 10 of Schilling cannot constitute the claimed “gasket.” As evident from Figure 1 of Schilling, reproduced below, Schilling discloses no gasket between MEA 4 and bipolar plates 2 and 3. Accordingly, Schilling fails to teach or suggest, “a gasket interposed between said bipolar plate and a membrane electrode assembly,” as recited in claim 1.



Further, in a discussion of claim 2, now canceled, the Examiner asserted, “Schilling teaches a sealing structure comprising an anchor (10 sealing element) in

contact with said sealing groove (9) (col. 4, lines 23-35; figure 4B).” Office Action at 5.

This is not correct.

As discussed above, sealing element 10 of Schilling at best corresponds to the “rubber” recited in claim 1. Accordingly, sealing element 10 of Schilling, cannot also constitute “an anchor in contact with said sealing groove,” as recited in claim 1.

Moreover, the Examiner acknowledged, “Schilling does not specifically teach that the anchor width is greater than the sealing groove.” Office Action at 5. However, to cure the deficiencies of Schilling, the Examiner asserted, “it would have been obvious to a person of ordinary skill in the art . . . to optimize the width of the sealing groove to get the proper sealing for the polymer electrolyte fuel cell.” Office Action at 6. The Examiner’s assertion is not correct.

Amended claim 1 recites, “an anchor in contact with said sealing groove, whose width is greater than the width of said sealing groove,” (emphasis added). Amended claim 1 does not recite any optimum width of the claimed sealing groove. As discussed above, Schilling fails to teach or suggest the claimed “anchor.” Accordingly, Schilling cannot disclose the width of an undisclosed entity, nor can Shilling compare the width of an undisclosed entity with the width of groove 9. For at least this reason, Schilling fails to teach or suggest, “an anchor . . . whose width is greater than the width of said sealing groove,” as recited in claim 1 (emphasis added).

In view of the above, Schilling fails to teach each and every element of claim 1 and cannot anticipate claim 1. Accordingly, claim 1 is allowable over Schilling.

Claims 5 and 9 depend from claim 1, and require all the elements of claim 1. Accordingly, claims 5 and 9 are allowable over Schilling at least due to their dependence from allowable claim 1.

### **III. Rejections of Claims 2-4 and 6-8 under 35 U.S.C. § 103(a)**

Applicant respectfully traverses the Examiner's rejections of claims 2-4 and 6-8 under 35 U.S.C. § 103(a). No *prima facie* case of obviousness has been established.

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007) (internal citation and inner quotation omitted). "In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I) (emphases in original).

"[T]he framework for objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

Claims 3, 4, and 6 depend from claim 1 and require all the elements of claim 1. As discussed above, claim 1 is allowable over Schilling. Accordingly, claims 3, 4, and 6 are allowable over Schilling at least due to their dependence from allowable claim 1.

The Examiner cited Sasaki as allegedly teaching subject matter recited in claim 7, and cited Sakumato as allegedly teaching subject matter recited in claim 8. Even assuming the Examiner's characterization of Sasaki and Sakumato is correct, which Applicants do not concede, Sasaki and Sakumato still fail to cure the deficiencies of Schilling, discussed above. That is, Sasaki and Sakumato also fail to teach or suggest, "a gasket interposed between said bipolar plate and a membrane electrode assembly; and an anchor in contact with said sealing groove, whose width is greater than the width of said sealing groove," (emphasis added) as recited in claim 1 and required by claims 7 and 8.

For at least this reason, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Moreover, the prior art provides no teaching or suggestion that would motivate one of ordinary skill in the art to modify the prior art to achieve the claimed combination. Accordingly, no reason has been clearly articulated as to why the prior art would have rendered claims 7 and 8 obvious to one of ordinary skill in the art. Accordingly, claim 7 is allowable over Schilling and Sasaki, and claim 8 is allowable over Schilling and Sakumato.

Applicant has canceled claim 2. Accordingly, the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Schilling is moot.

**IV. Conclusion**

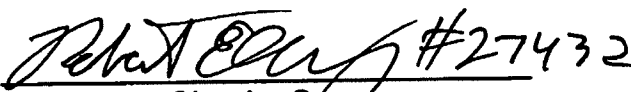
In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: March 3, 2009

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